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Copy 10 of 14

22 JAN 1966

MEMORANDUM FOR THE RECORD

SUBJECT : Summary 13 January 1966 OXCART Contractors' Meeting on Field Inspection/Maintenance.

1. General Ledford opened subject meeting by indicating marked dissatisfaction with the current quality of aircraft maintenance, alluding particularly to that performed by Lockheed under the existing service contract. He indicated that little if any improvement has been apparent since August 1965 when the situation was pointedly brought to Lockheed's attention by Headquarters with the then Lockheed response that immediate corrective management steps were underway. The General by way of emphasizing the need for improvement requested all parties to constantly review and improve their maintenance operations with the view toward a zero defects level of competence.

2. Mr. Johnson opened his remarks by expressing disagreement. By way of rebuttal he said that since August 1965 some improvement does exist, that Lockheed is gravely concerned over the matter, and that implementation of a zero defects program per se is next to useless. (The applicability of this rebuttal, while perhaps understandable from an emotional standpoint was not really apparent.) Mr. Johnson defended the Skunk Works type of organization whereby field inspection reports back to Burbank and finally to him. He defined the crux of the problem as the level of personnel competence, union restrictions against written exams for qualification, and the inadvertent mixing of new lower quality personnel brought in for the modification program with the higher quality flight line personnel without adequate supervision and without any formal training specifically for this program. He further admitted inadequacy of technical data and cross referencing between drawings,

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OXC-9837-66

letter instructions, and the maintenance manual. When questioned on the distribution and scope of the maintenance manual (both inadequate) he pleaded security and cost as the reasons. This was put back in perspective by the flat denial of Headquarters attendees. Mr. Johnson promised immediate action for improving personnel supervision, job assignments, training, and the distribution and scope of technical data. He went on to point out that Headquarters and the Detachment have sanctions and control of Lockheed personnel under the existing service contract. This was met with varying degrees of surprise by the other attendees. General Ledford indicated that this would be fully investigated and appropriate clear-cut action taken.

3. At General Ledford's request, [redacted] summarized the organization and functions of the USAF field Quality Assurance operation. He pointed out the major differences between this and plant quality control which indicated that in the field all maintenance operations including inspection reported to an on site chief of maintenance. This logical approach, contrary to the existing Lockheed plant type quality control where field inspection reports back to the plant, met with considerable discussion because of the uniqueness of the Headquarters/Lockheed service contract and the Lockheed table of organization which has a Lockheed flight test engineer in charge of field maintenance. This approach was also met with considerable emotion on the part of Mr. Johnson.

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4. General Ledford indicated appreciation of Mr. Johnson's rebuttal and reminded him that there are still too many maintenance errors and little if any improvement apparent in the quality of his personnel.

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5. [redacted] of Honeywell North, having been asked to limit his well prepared and extensive presentation to identification of possible existing inspection gaps, commented on several areas of potential improvement. They included improvement of esprit de corps through increased security clearance levels, second shift limitation as much as possible, implementation of end to end checks, and more definitized procedures in the many Lockheed/Honeywell equipment interface

SECRET

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OXC-9837-66

areas. Mr. Johnson asked if this implied that Lockheed interface procedures were inadequate. [redacted] answer was "yes". Mr. Johnson then had his plant chief inspector descend upon General Ledford with a large looseleaf packed with various procedures.

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6. Discussion ensued concerning inspection channels and who really had the final authority in the field (in view of the various contractor interfaces) under the unique and existing Lockheed service contract type maintenance. General Ledford, for the third time, asked who could write off a "red X" (imposed by inspection on a component determined to be unqualified for flight). Three answers were provided. The Lockheed Chief Inspector answered [redacted]

Mr. Johnson answered

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"Kelly Johnson".

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7. Pratt & Whitney's presentation, as requested of Honeywell North, was limited to an outline of inspection organization/channels by [redacted] All engine maintenance operations and inspection reports through [redacted] Chief Field Service Representative on site to [redacted] JT11 Engine Chief of Field Service located in Los Angeles. Specific questioning by Headquarters revealed that all program field personnel received six months formal training in Florida on the JT11 engine prior to field assignment. Further questioning revealed that the engine maintenance manual is the field mechanics' and inspectors' "bible", that it is up-to-date and broad in scope, and that distribution and availability to all concerned is plentiful with no security restrictions within the program.

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8. [redacted] of Honeywell South confined his comments mainly to a block diagram showing maintenance/inspection steps leading toward preflight with the complexities of Honeywell/Lockheed interfaces. Mention was made of the instances involving interface preflight errors later reflected in inflight operation of the INS.

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9. [redacted] Director of Engineering for the Firewel Co. recapped company organization structure and individual responsibilities for project OXCART. He explained the

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OXC-9837-66

25X1 equipment inscription and replacement procedures in force  
25X1 and reviewed the experience level of the technical represen-  
tatives [redacted] The policies governing the  
function of Firewel [redacted] were accepted as adequate.

25X1 10. [redacted] Vice President R&D, of the  
25X1 David Clark Co. made a presentation along parallel lines with  
that given by [redacted] gave a detailed  
explanation in justifying the need for an additional David  
25X1 Clark tech rep [redacted] Questioning by General Ledford  
revealed that this gap in coverage existed because of reluc-  
tance (probably fostered by a misunderstanding in Operations)  
on the part of the Detachment. In spite of [redacted]  
expressed desire for further investigation, General Ledford  
et al were in agreement and an additional tech rep will be  
assigned. The policies of D. Clark Co. were considered  
adequate.

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25X1 11. [redacted] presented what appeared to be a  
25X1 joint Detachment [redacted] position regarding corrective  
actions involving both maintenance and inspection. In summary,  
they included implementation of closer technical supervision  
of the assigned aircraft specialist with an added supervisory  
sign off on work performed; implementation of training emphasizing  
formal courses, performance evaluation, and personnel  
qualification records; upgrading standards/technical data  
including installation check lists, operating check lists,  
procedures, manual revisions to broaden scope and be under-  
standable and available to all personnel, and revised drawings  
with cross referencing to manuals and letter instructions for  
clarification of supersedance. An assistant to [redacted]  
the Lockheed Detachment Manager and an administrative assis-  
tant to [redacted] the Lockheed Maintenance Division  
superintendent were proposed.

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25X1 12. [redacted] further proposed a Detachment Inspection  
Section comprised of five mechanical and five electrical  
inspectors reporting to him as D/M. Considerable confusion  
ensued particularly on the part of Mr. Johnson as to the  
function of this group and how it would be integrated into the  
system under the present contract. Considerable discussion

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OXC-9837-66

and time was expended in explanation. This revealed that such a group was really not an inspection group as such, rather a management analysis (special assistants) group for the purpose of examining operations relative to published procedures; examining methods, communications, management control; and advising the D/M of its findings with recommendations for improvement. Mr. Johnson expressed continued disagreement pointing out that the crux of the present problem was one of people not doing their assigned job and not one of a completely inadequate system. He admitted deficiencies in the system but which he feels are correctable and advised against attempting to correct these and personnel incompetence by imposing another layer of inspection or people. He asked the question, "Where, in the event of another aircraft 126 accident under these proposed ground rules, would you place the responsibility?" General Ledford indicated that this issue would receive serious consideration at Headquarters prior to implementation of any change.

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13. [redacted] presented a summary and perspective definition of the key issues involved in the service contract in relation to the Skunk Works management philosophy and in relation to perhaps changing requirements. He pointed out that under the contract as written, Lockheed has full and complete responsibility for performing maintenance and accomplishing inspection of such maintenance work. The contract does provide that the government representatives (duly authorized representatives of the contracting officer) do have the right to "inspect" any maintenance work or inspection practices or procedures at any time. Therefore, the contract should be interpreted to mean that while the government may inspect at any time or issue directions to perform specific work or use specific inspection practices or procedures, yet, in the absence of any such specific direction from the government the contractor has full responsibility to accomplish maintenance and inspection in accordance with good industrial practices. He further indicated some personal reluctance to see the inspection system changed too drastically or too quickly. Under the terms of the contract he did not see anything wrong with

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OXC-9837-66

25X1 [redacted] proposal for having up to ten assistants or  
25X1 "inspectors". [redacted] commented to the effect that he  
felt the term "inspector" was really the wrong nomenclature  
and that in actuality any such additional people were more  
nearly "technical monitors" than they were inspectors.

25X1 14. The concensus of opinion at the end of the meeting  
was that the Detachment recommendations as expressed by  
[redacted] should and shall be implemented. The quantity and  
nomenclature applied to the additional "inspectors" or  
assistants will be reviewed prior to implementation. Certainly  
the responsibility and authority of the Detachment commander  
in monitoring the activities performed by the contractor under  
the service contract concept will be clarified and strengthened.

15. The attachment indicates agenda items prepared  
for this paper.

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[redacted]  
AD/TECH/OSA

Att: As Stated

25X1 AD/TECH/OSA/[redacted] (19 January 1966)

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13 JANUARY 1966 MEETING AGENDA

1. General Ledford - Opening Remarks
2. Order of Contractor Discussions:
  - A. Lockheed
  - B. Honeywell North
  - C. Pratt & Whitney
  - D. Honeywell South
  - E. Firewel
  - F. David Clark
3. Topics of Interest/Each Contractor:
  - A. General Inspection Philosophy.
  - B. Numbers of Inspectors.
  - C. Definition of Assignments.
  - D. Identification of Procedures and Applicable Standards.
  - E. Personnel Background/Experience/Training.
  - F. Communications Between Inspection, Maintenance Operations, Supervision, Engineering.
  - G. Possible Gaps in Inspection Coverage, Procedures, Standards, Training, or Communications.

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